Quick Start Guide

Version 1.0

ACTIVE-ELECTRODE

TF-IR BL

Order Code: 31013100

EN

GANN MESS- U. REGELTECHNIK GMBH
70839 GERLINGEN SCHILLERSTRASSE 63 INTERNET: http://www.gann.de
Verkauf National: TELEFON 07156-4907-0 TELEFAX 07156-4907-40 EMAIL verkauf@gann.de
Verkauf International TELEFON +49 7156-4907-0 TELEFAX +49 7156-4907-48 EMAIL sales@gann.de

Disclaimer

GANN Mess- u. Regeltechnik GmbH does not make any assurances or warranties with respect to this document and, to the extent permitted by law, limits its liability for breach of any implied warranty to the replacement of this document with another. Furthermore, GANN Mess- u. Regeltechnik GmbH reserves the right to revise this publication at any time without having to notify anyone about such revisions.

The information provided in this documentation includes general descriptions and/or technical characteristics for the performance of the equipment described herein. This documentation cannot be used as a proper assessment of the suitability or reliability of the equipment for a specific application by a user and must not be used as a substitute for such an assessment. It is the responsibility of any such user to carry out an appropriate and complete risk assessment, evaluation and testing of the equipment with regard to his specific application. Neither GANN Mess- u. Regeltechnik GmbH nor any of its partner or subsidiary companies can be made responsible or liable in the event of misuse of the information contained in this document.

All relevant national, regional and local safety regulations must always be observed when installing and using this device. For reasons of safety and to ensure compliance with the documented system data, only the manufacturer is authorised to carry out repairs to components. Failure to observe this information may result in injury or damage to the equipment.

Copyright © 2025 GANN Mess- u. Regeltechnik GmbH, Gerlingen
All rights reserved. No part of this publication may be reproduced, processed or distributed in any form, including photocopying, recording or any other electronic or mechanical process, without the written permission of the publisher. Requests for permissions must be made in writing to the publisher at the address given on the title page.

Table of Contents

1 Foreword 4

1.1 Explanation of the General Warnings 5

1.2 Specific Warnings 5

2 Description of the Product 6

3 Specifications 7

3.1 Technical Data 7

3.2 Prohibited Environmental Conditions 7

3.3 Messbereiche 8

3.4 Transport & Storage Conditions 8

4 Usable Hydromettes 9

4.1 Hydromette CH 17 9

4.2 Hydromette BL UNI 11 11

5 Using the Active Electrode TF-IR BL 12

5.1 Measuring relative Humidity 13

5.2 Measuring Air Temperature 14

5.3 Measuring using IR-Sensor 14

5.4 Emissivity 15

5.5 Measurement Spot Size 15

1 Foreword

This quick start guide contains short information on how to use the TF-IR BL active electrode. It also provides an overview of the Hydromettes to which the active electrode can be connected.

The manual contains only parts of the legal and safety information as well as parts of the application instructions and has been shortened for better readability.

A complete digital version of the operating instructions for the connectable Hydromettes with all relevant information is available on our homepage in the download area.

Only use the device if you have read and understood all legal and safety information as well as the application instructions in the complete operating instructions for the respective Hydromette.

1.1 Explanation of the General Warnings

The following danger levels are used in this quick start guide to indicate potentially dangerous situations and important safety instructions:

Danger Level	Description
 **DANGER**	**Danger / Indicates a hazardous situation which, if not avoided, will result in death or serious irreversible injuries.**
 **WARNING**	Warning / Indicates a hazardous situation which, if not avoided, could result in death or serious irreversible injuries.
 **CAUTION**	Caution / Indicates a hazardous situation which, if not avoided, could result in minor or moderate injuries.
 **INFORMATION**	Indicates important information.

1.2 Specific Warnings


CAUTION

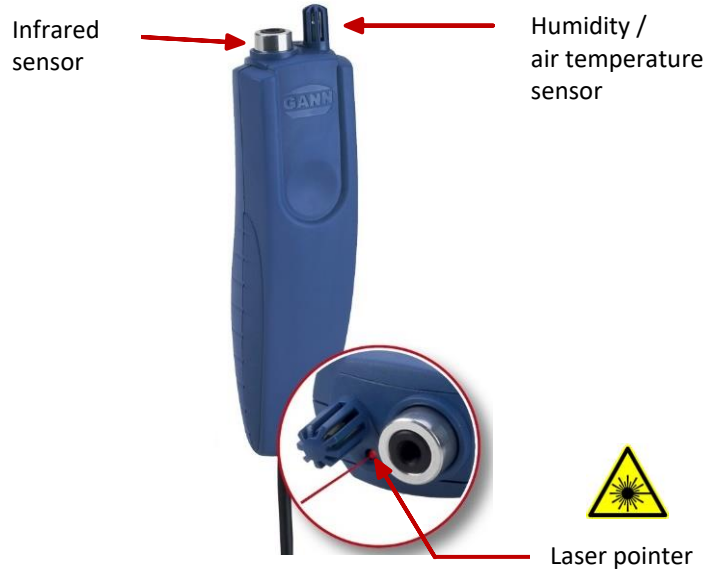
The active electrode TF-IR BL uses a laser of laser class 2 according to IEC 60825-1. People can be blinded by the laser. The laser must never be directed at people or animals. Do not look directly into the laser beam and avoid reflections on reflective surfaces.

2 Description of the Product

The TF-IR BL active electrode is a combined electrode that can be used to simultaneously perform climate measurements (air humidity and air temperature) and infrared surface temperature measurements.

This combination of different measuring methods enables the TF-IR BL to quickly and reliably assess dew point undershoots, or to detect borderline situations on surfaces such as walls, ceilings, floors and window and balcony door lintels.

If used in good time, this can prevent mildew formation or reliably assess the occurrence of condensation humidification.



3 Specifications

3.1 Technical Data

Storage conditions:	+ 5 to + 40 °C
	- 10 to + 60°C (for a short time)
Operating conditions:	0 to + 50 °C
	- 10 to + 60°C (for a short time)
	< 85 % R.H. non-condensing
Dimensions (without cable):	190 x 50 x 35 (L x W x H) mm
Weight (with cable):	approx. 164 g
Protection class:	III
Protection rating:	IP20

3.2 Prohibited Environmental Conditions

- Condensation. humidity continuously too high (> 85% R.H.) and wetness
- Permanent presence of dust and combustible gases, vapours or solvents
- Ambient temperatures continuously too high (> +50 °C)
- Ambient temperatures continuously too low (< 0 °C)

3.3 Messbereiche

Humidity: 0 … 100 % R.H.

± 1.8 % R.H. in the range 10 to 90% R.H.(*)

Air temperature: -20 … 80 °C

± 0.3 °C in the range 0 to 60 °C (*)

(*) Typical sensor accuracy

Infrared: -40 … 380 °C

± 0.5 °C in the range 0 … 60 °C,
at ambient temperature 0 … 50°C(*)

(*) Typical sensor accuracy

3.4 Transport & Storage Conditions

The TF-IR BL active electrode may only be stored in the packaging provided by the manufacturer or available from the manufacturer as an accessory. The manufacturer shall not accept any liability or warranty for damage that may occur to the device or to the sensor system as a result of non-compliance.

INFORMATION

In particular, **avoid keeping or storing the devices in foams not supplied by the manufacturer**, as these can damage the sensors due to possible outgassing and result in incorrect measurements.

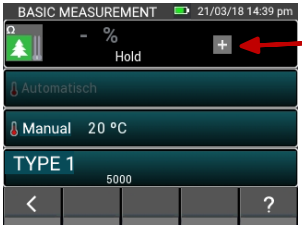
4 Usable Hydromettes

4.1 Hydromette CH 17

The active electrode TF-IR BL must be connected to the measuring instrument via the 3.5 mm jack receptacle. Ensure that the octagonal plug is firmly seated. The measuring instrument now automatically recognises the connected accessories.

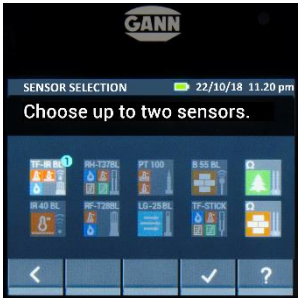
To measure, a measurement mode must first be selected by touching on the touch display, here an example of selecting the basic measurement.

The basic measurement offers a pure measuring function without the option of saving measured values in the device. It is intended for quick measurements that do not require documentation of the results.



Touching the "+" symbol takes you to the sensor selection.

Sensors that are connected to the measuring device are visually highlighted and can be selected.



To activate the RHT-IR measurement mode, the "TF-IR BL" symbol must now be selected. The selection is confirmed by pressing the "Confirm" button.

For all information, read the complete operating instructions for the Hydromette CH 17 on our homepage (in **English**: pdf. file with **EN** extension):

https://www.gann.de/en/products/handhelds/electronic-moisture-meters/ch-17#downloads

4.2 Hydromette BL UNI 11

The Hydromette BL UNI 11 and the TF-IR BL active electrode must be connected to each other via the 3.5 mm jack receptacle. Ensure that the octagonal plug is correctly seated.

The Auto-Sensor technology now recognises the connected electrode. To activate the RHT-IR measurement, the measurement button must be pressed for **longer** than *2 seconds*. The device now starts in the measurement menu or main menu. The measuring process can be performed here. The RHT-IR measurement remains active until the active electrode TF-IR BL is replaced by another electrode or TF stick and its measurement mode is activated.

For all information, read the complete operating instructions for the Hydromette BL UNI 11 on our homepage (in **English**: pdf. file with **EN** extension):

https://www.gann.de/en/products/handhelds/electronic-moisture-meters/blue-product-series/bl-uni-11#downloads

5 Using the Active Electrode TF-IR BL

Measure:

Press and hold the **"M"** button for longer than *2 seconds*. A measurement process is carried out as long as the measure button is kept pressed. After releasing the **"M"** button, the measurement process is interrupted and the **"Hold"** symbol is displayed.

Measuring error:

Measurements below 20% R.H. and above 80% R.H. should preferably not be taken over a prolonged period of time (continuous measurements). Other measurement falsifications can occur due to shielding with body parts (e.g. hand) as well as blowing or speaking/breathing in the direction of the sensor.

Caution:

- The sensor is not designed for continuous measurements above 80% R.H. (longer than approx. 36 hours at a time without regeneration at 30-40% R.H. in the same time frame).
- The measuring device may only be exposed to temperatures above 50 °C for short periods.

INFORMATION

For particularly precise measurements, especially at temperatures below room temperature (20–25 °C) or if there are significant temperature differences between the intrinsic temperature of the measuring instrument and the ambient climate, the device should be

exposed to the ambient climate for approx. 10 to 15 minutes or until the temperature has equalised. The sensor adapts to the respective climate even when it is not switched on.

Precautions:

The sensor can be irreparably damaged by various mechanical or environmental influence. These include in particular:

- direct contact of the sensor with the fingers
- direct contact with solid or sticky materials or objects
- measurement in environments containing solvents, oil vapours or other high levels of contaminants
- storing the sensor in foam materials NOT provided by us
- removal from the drill hole too hastily. This can cause the sensor cap to get stuck in the drill hole and tear off. The entire sensor pipe and sensor may be irreparably damaged
- Tearing off the sensor cap due to a drill hole that is too narrow, resulting in damage to the sensor pipe and the sensor

5.1 Measuring relative Humidity

The response speed of the sensor is very high, so that even small air flows (door gap, leaky window, etc.) influence the measured value display. An absolute standstill of the display can therefore only be achieved in a climate box.

The response time of the humidity sensor in slightly moving air is approx. 8 seconds* at an ambient temperature of 25 °C for 63 % of the humidity difference. The filter used to protect the sensor (in RH-T models and the TF-Sticks 16 K-25 M / P) delays the response time. By swivelling the device (ventilation of the sensor),

the response time can be shortened in the event of air standstill or low air velocity.

*Specifications of the sensor manufacturer

5.2 Measuring Air Temperature

The response speed of the sensor is very high, so that even small air flows (door gap, leaky window, etc.) influence the measured value display. An absolute standstill of the display can therefore only be achieved in a climate box.

The response time of the air temperature sensor in moving air is approx. 5–30 seconds for 63 % of the temperature difference*. The filter used to protect the sensor (in RH-T models and the TF sticks 16 K-25 M / P) delays the response time.

*Specifications of the sensor manufacturer

5.3 Measuring using IR-Sensor

If measurements are taken for more than 10 seconds in the immediate vicinity of hot or cold parts (exhaust pipe, radiant heater or ice / refrigeration unit), the measured value may be falsified. After approximately 10 minutes waiting time (temperature equalisation of sensor housing and ambient temperature), the measurement can be repeated. To achieve accurate measurements, the temperature of the measuring instrument must match the respective ambient temperature.

To avoid measurement errors and to prevent the device from being damaged, you should …

- … not press the sensor opening of the probe directly onto the object to be measured..
- … not measure in air that contains vapours or is heavily contaminated.

- … not measure through very hot air (shimmering heat).
- … not measure objects that are exposed to direct sunlight (shade these objects).
- … not measure objects located in immediate vicinity of equipment radiating large amounts of heat (interrupt thermal radiation).
- … not expose this high-quality measuring instrument to very high or low temperatures (e.g. transporting the device in the boot of a car).
- … not expose the unit to high humidity (condensing).
- … not measure in the immediate vicinity of electromagnetic or electrostatic sources (HF generators, electric motors, ignition voltages etc.).

5.4 Emissivity

All bodies with a temperature above "absolute zero" (= 0 K or -273 °C) emit infrared radiation, also known as thermal radiation. The intensity of this thermal radiation, taking into account the emissivity, is considered a measure of the surface temperature.

An emission factor of 95 % applies to most building materials, plastics, textiles, papers and non-metallic surfaces. A detailed list of different emission factors can be found in the respective operating instructions for the connectable Hydromettes.

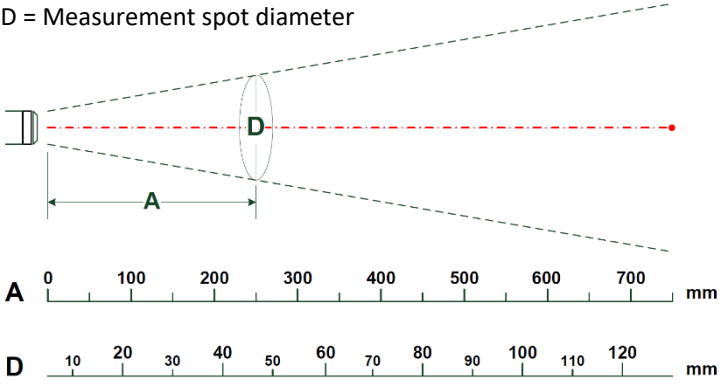
5.5 Measurement Spot Size

The measurement spot diameter depends on the distance and is 5 mm immediately before the probe opening. By increasing the distance (A) of the measuring instrument from the object to be measured, the measuring spot diameter (D) increases proportion-

ally in the ratio of approx. 6:1. With a distance (A) of 250 mm, the measurement spot diameter (D) is 46 mm. For the measuring distance (A) between the surface to be measured and sensor, we recommend using 20 to 50 mm. The respective diameter can be determined using the figure below.

A = Distance to the object to be measured

D = Measurement spot diameter



-Subject to technical changes- Status: May 2025

GANN MESS- U. REGELTECHNIK GMBH
70839 GERLINGEN SCHILLERSTRASSE 63 INTERNET: http//www.gann.de
Verkauf National: TELEFON 07156-4907-0 TELEFAX 07156-4907-40 E-MAIL: verkauf@gann.de
Verkauf International: TELEFON +49-7156-4907-0 TELEFAX +49-7156-4907-48 E-MAIL: sales@gann.de